SERVICE MANUAL

marantz®

model SM500DC

Stereo Power Amplifier

MARANTZ DESIGN AND SERVICE

Using superior design and selected high grade components, MARANTZ Company has created the ultimate in stereo sound. Only original MARANTZ parts can insure that your MARANTZ product will continue to perform to the specifications for which it is famous.

Parts for your MARANTZ stereo are generally available within 72 hours throughout the nation via a toll-free line to our National Parts Depot in California. The sales professionals who take your call immediately refer to their own desk top computer terminal and can quickly determine the availability and price information you require. If for some reason, your order should exceed our available stock, we usually can instantly provide an alternate replacement part or current delivery information. When the order is placed and confirmed, the computer simultaneously generates "hard copy" orders at the distribution center. As hard copies come directly from the computer to the national parts depot, your requested stock is assembled and prepared for shipment and placed on the first available carrier for delivery to you.

ORDERING PARTS

Phone orders will eliminate mail delays, and we encourage the use of this method. If you order by mail, use MARANTZ parts order forms which are available from our National Parts Depot located at the following address:

SUPERSCOPE NATIONAL PARTS DEPARTMENT
20525 Nordhoff Street
Chatsworth, California 91311
Phone: 1-800-423-5108
1-213-998-9333

The following information must be supplied to eliminate delays in processing your order:

1. Complete address.
2. Complete part numbers.
3. Complete description of parts.
4. Model number for which part is required (indicate MARANTZ).
5. Account number (for account customers only).

Direct consumers will be provided with the current retail prive quotation on available parts in order to advise them of the cost of the parts and shipping.

OVERSEAS PARTS ORDERING

Parts may also be ordered from the following overseas addresses:

U.S.A.
Marantz Company, Inc.
National Service Dept.
P.O. Box 577
Chatsworth, CA91311
U.S.A.

CANADA
Superscope Canada, Ltd.
3710 Nashua Drive
Mississauga
Ontario, Canada L4V1M5

AUSTRALIA
Marantz Australia
32 Cross Street
Brookvale, NSW 2100
Australia

JAPAN
Marantz Japan, Inc.
3622 Kamitsuruma
Sagamihara-shi
Kanagawa, Japan

EUROPE

Marantz Europe S.A.
326 Avenue Louise Bte 32
1050 Brussels
Belgium

Marantz France
4 rue Bernard Palissy
92600 Asnieres
France

Marantz Audio U.K., Ltd.
193 London Road
Staines, Middlesex
United Kingdom

Marantz Germany GMBH
Max-Planck-Strasse 22
6072 Dreieich
West Germany

Marantz Belgium
45 rue Auguste Van Zande
1080 Brussels
Belgium

Marantz Svenska A.B.
Franzengatan 6
10425 Stockholm
Sweden

Marantz Norske A.S.
Refstadalleen 13
Oslo 5
Norway

All of the above locations are fully equipped to take care of your total service needs. Because various countries have differing configuration requirements, it is necessary that you contact the service facility in your particular country. In the event that there is no service location listed for your country, please contact the nearest facility for the necessary assistance.

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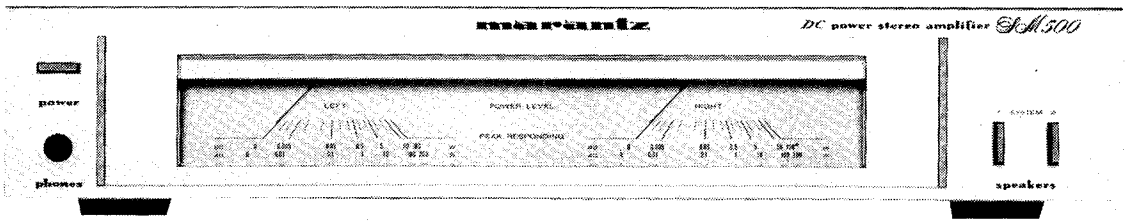
MODEL SM500 DC STEREO POWER AMPLIFIER



1. INTRODUCTION

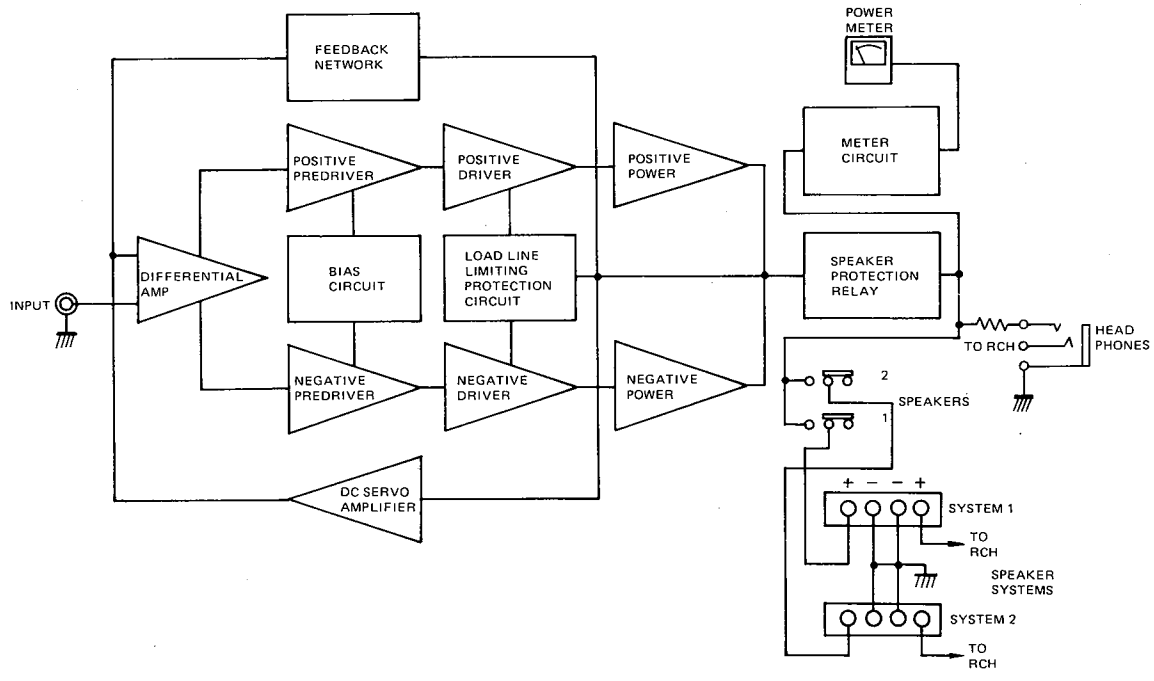
This service manual was prepared for use by Authorized Warranty Stations and contains service information for the Marantz Model SM500DC Stereo Power Amplifier. Servicing information and voltage data included in this manual are intended for use by knowledgeable and experienced personnel only. All instructions should be read carefully. No attempt should be made to proceed without a good understanding of circuitry operation.
The parts list furnishes complete ordering information. Most replacement parts should be ordered from the Marantz Company. However, a simple description is included for parts which can be obtained locally.

2. P.W. BOARDS

As can be seen from the circuit diagram, the chassis of Model SM500DC consists of the following units. Each unit mounted on a printed circuit board is described within the square enclosed by a bold dotted line on the circuit diagram.

1. Main Amp & Power Supply. . . . . mounted on P.W. Board P700
2. Speaker Switch. . . . mounted on P.W. Board PS00
3. Head Phone . . . . . .mounted on P.W. Board PW00
4. Lamp . . . . . .mounted on P.W. Board PZ00

3. BLOCK DIAGRAM



4. TEST EQUIPMENT REQUIRED FOR SERVICING

This table lists the test equipment required for servicing for the Model SM500DC Stereo Power Amplifier.

Item	Manufacturer and Model No.	Use
Distortion Analyzer Audio Oscillator AC Voltmeter	Sound Technology Model 1700B	Distortion Measurements Sinewave and squarewave signal source voltage measurements (AC)
Oscilloscope	Tektronix Model T932 Philips Model 3232	Waveform analysis and trouble shooting and ASO alignment
Circuit Tester		Trouble shooting
DC Voltmeter	Fluke Model 8000 "Digital" Simpson Model 313, Triplet Model 801	Voltage measurements (DC)
AC Wattmeter	Simpson Model 1379	Monitors primary power to amplifier
AC Ammeter	Commercial Grade (1 ~ 10 A)	Monitors amplifier output under short circuit condition
Line Voltmeter	Simpson Model 1359	Monitors potential of primary power to amplifier
Variable Autotransformer	Superior Electronic Co., Powerstet Model 116B-10A	Adjusts level of primary power to amplifier
Shorting Plug	Use phono plug with 600 ohm across center pin and shell	Shorts amplifier input to eliminate noise pickup
Output Load (8 ohms, ±0.5% 100 W)	Commercial Grade	Provides 8-ohm load for amplifier output termination
Output Load (4 ohms, ±0.5% 100 W)	Commercial Grade	Provides 4-ohm load for amplifier output termination
Output Load Capacitor (0.5 mfd)	Mylar	Provides capacitive load for instability checks
AC Power Control Box	Optional Item. Fabricate in accordance with Figure 1	Monitors and controls primary power for amplifier
Amplifier Output Load Box	Optional Item. Fabricate in accordance with Figure 2	Provides various amplifier loads and can monitor shorted output

5. ALIGNMENT PROCEDURES

5.1 Idling Current Alignment Procedure

Where to be adjusted: R733 and R734
Adjusted value: 20 mV (20 mA ea.)
Procedure

1 With the input of the set placed in Open, set the power switch to ON.
2 Adjust semi-fixed resistance, R733 and R734, so that the voltage of both the ends of R741 and R742 may become 20 mV after 10 seconds.

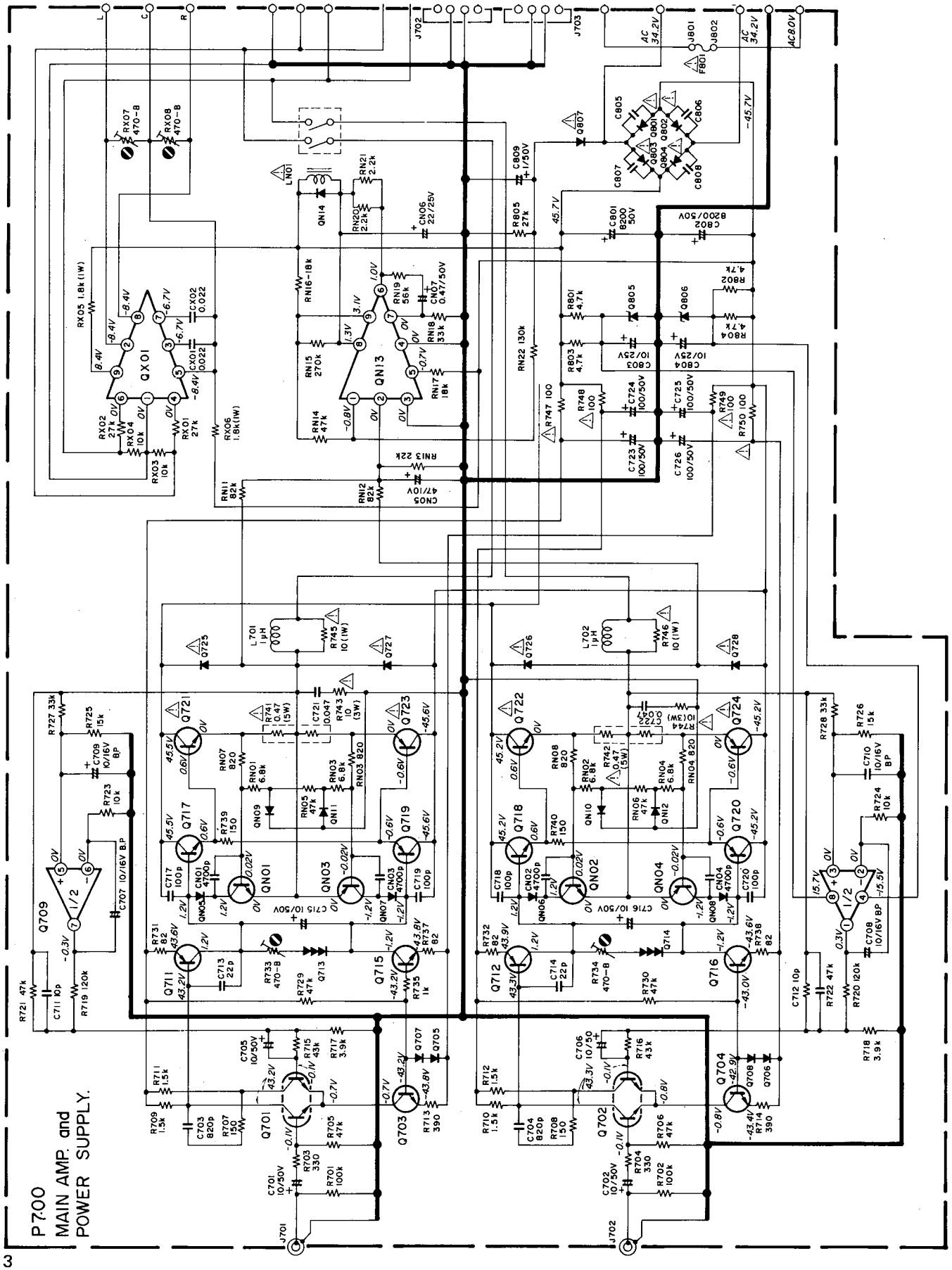
5.2 Power Meter Alignment Procedure

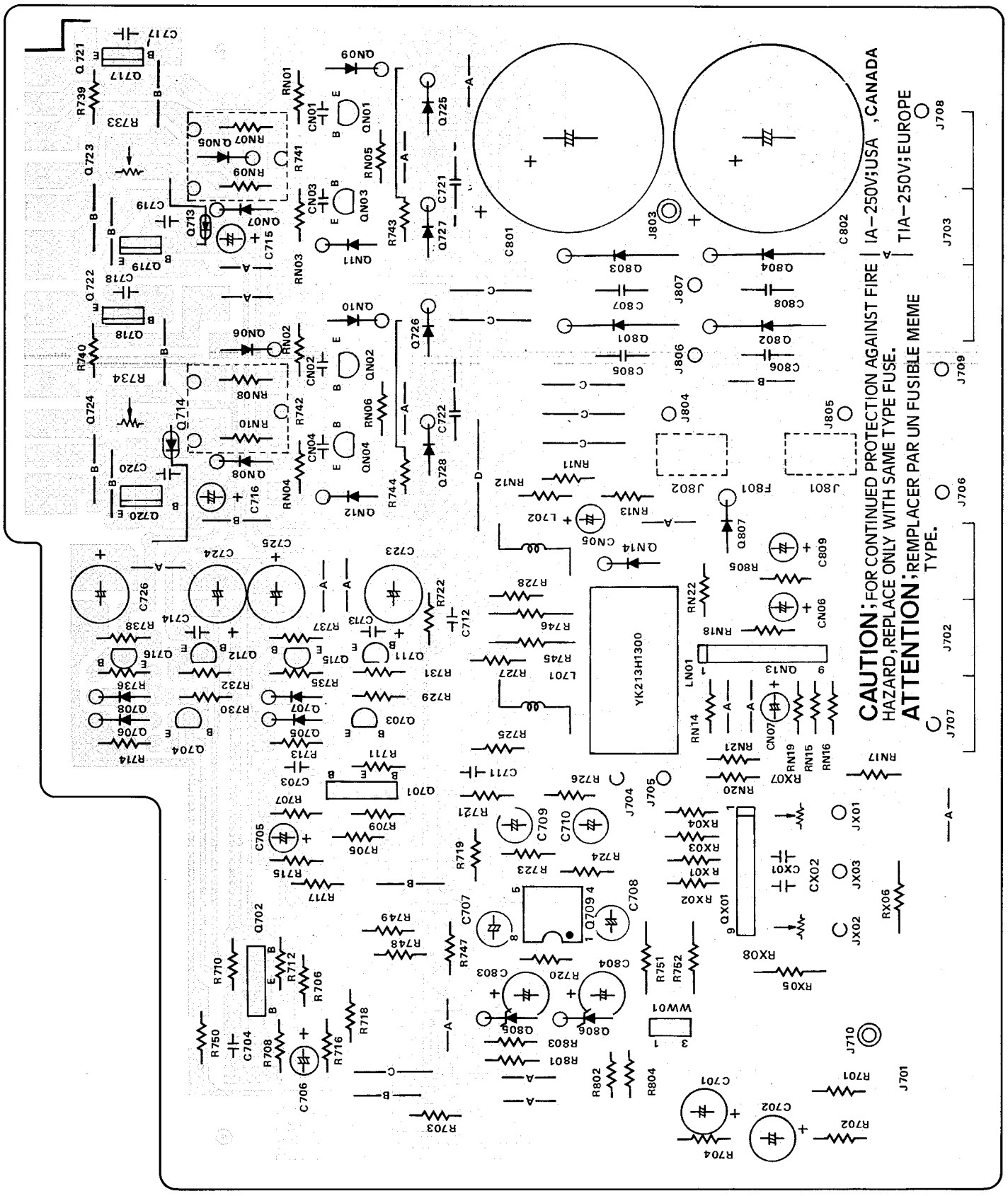
Where to be adjusted
L channel. RX74
R channel RX08
Procedure

1 Connect the load resistance 8Ω to the speaker terminal of the set.
2 Connect the 1 KHz from SG to input.
3 Set the power switch of the set to ON, increase the SG output, and adjust the speaker output to become 50W – 8Ω (20V).
4 Adjust RX07 and RX08 so that the meter may indicate 50W (8Ω).

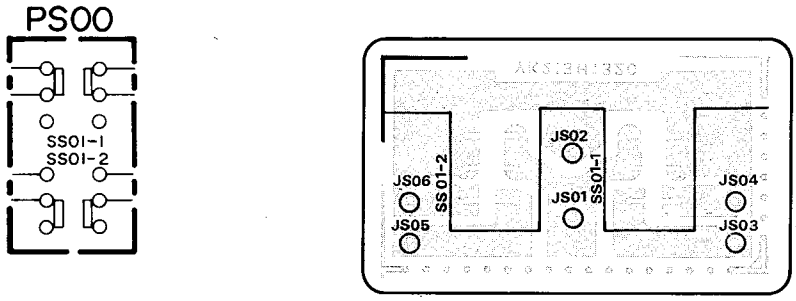
6. DIAGRAM AND COMPONENT LOCATIONS

6.1 Main Amp & Power Supply Assembly (P700) Schematic Diagram and Component Locations.



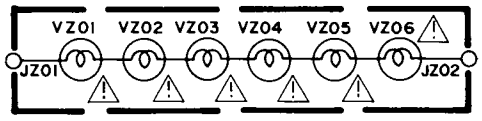

CAUTION; FOR CONTINUED PROTECTION AGAINST FIRE | IA-250V;USA ,CANADA
HAZARD, REPLACE ONLY WITH SAME TYPE FUSE.
ATTENTION; REMPLACER PAR UN FUSIBLE MEME TYPE. | TIA-250V;EUROPE
YK213H1300

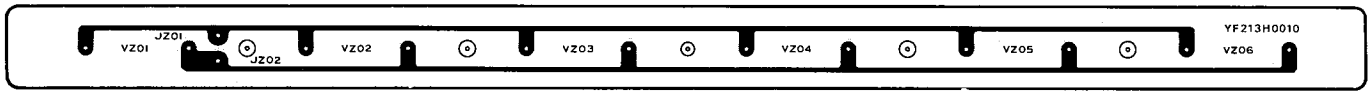
6.2 Speaker Switch Assembly (PS00) Schematic Diagram and Component Locations



6.3 Headphone Assembly (PW00) Schematic Diagram and Component Locations

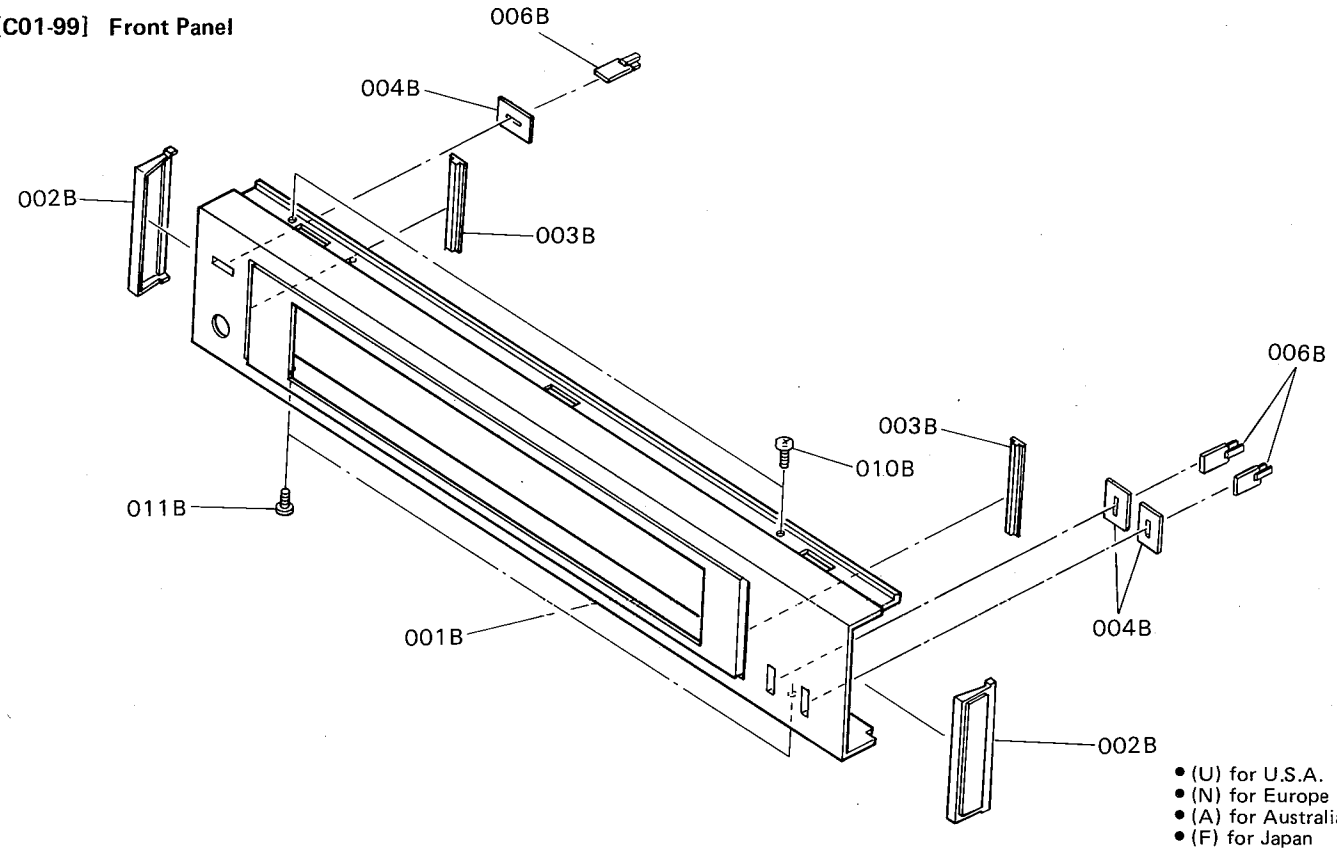
6.4 Lamp Assembly (PZ00) Schematic Diagram and Component Locations





7. EXPLODED VIEW AND PARTS LIST

- **[C01-99] Front Panel**

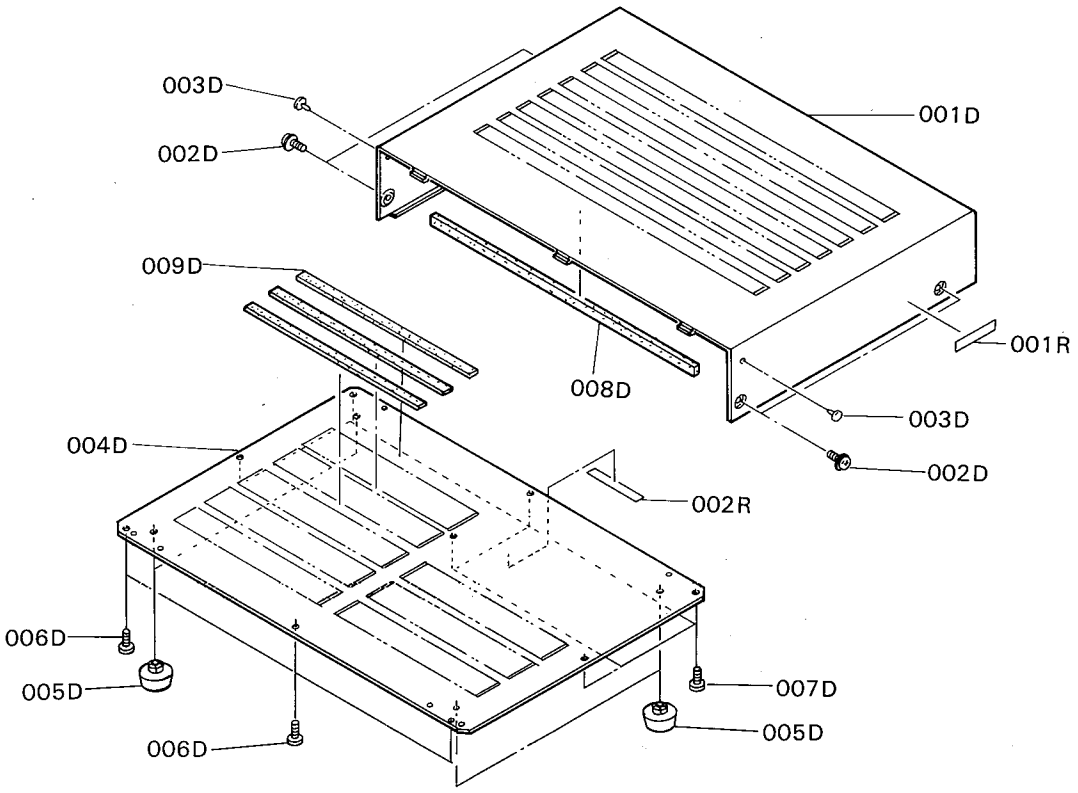


- (U) for U.S.A.
- (N) for Europe
- (A) for Australia
- (F) for Japan

REF. DESIG.	Q'TY U	N	A	F	PART NO.	DESCRIPTION
A	1	1	1		123Z063400	Front Panel Assembly
A1				1	123Z063410	Front Panel Assembly
001B	1	1	1		123Z063010	Escutcheon, Front Panel
001B				1	123Z063110	Escutcheon, Front Panel
002B	2	2	2	2	403H067010	Cap
003B	2	2	2	2	403H063020	Escutcheon
004B	3	3	3	3	208H259010	Bushing, Push Switch

REF. DESIG.	Q'TY U	N	A	F	PART NO.	DESCRIPTION
006B	3	3	3	3	208H154060	Knob, Push Switch
010B	2	2	2	2	51300306B0	P.H. Tapped Screw P3x6
011B	2	2	2	2	51300306B0	P.H. Tapped Screw P3x6

- **[C02-99] Lid. (Top and Bottom Cover)**

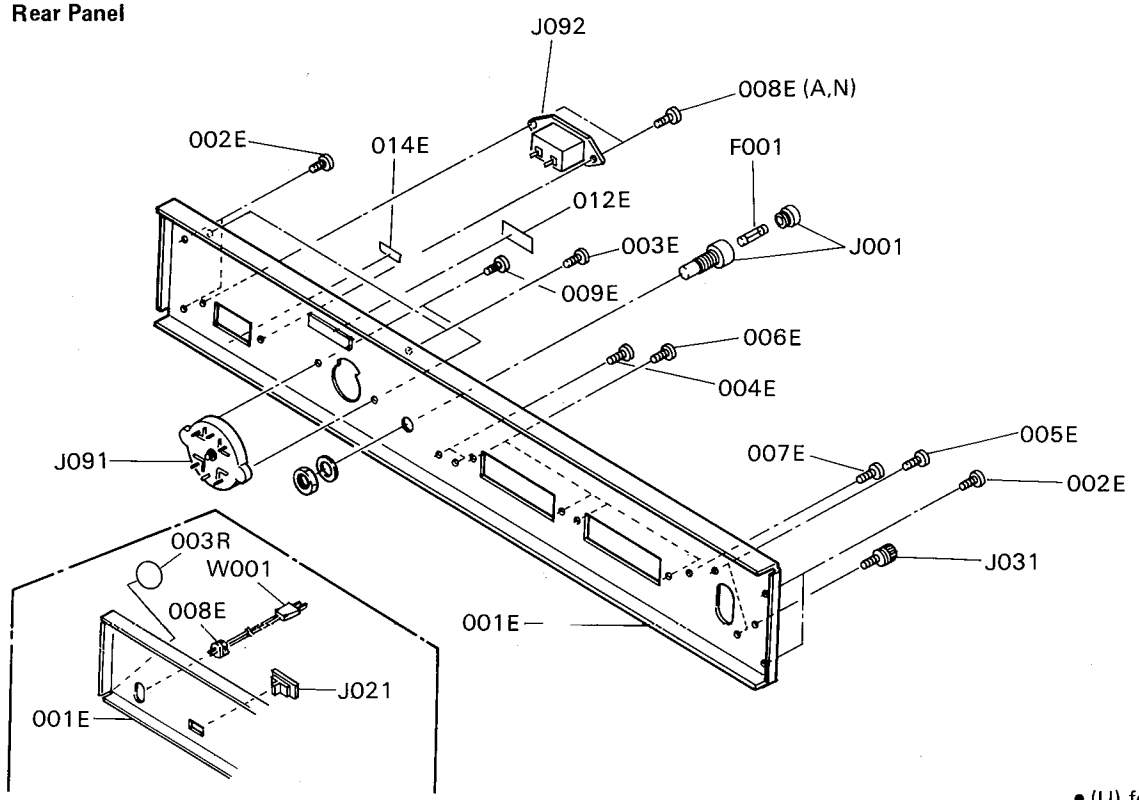


- (U) for U.S.A.
- (N) for Europe
- (A) for Australia
- (F) for Japan

REF. DESIG.	Q'TY U	N	A	F	PART NO.	DESCRIPTION
001D	1	1	1	1	208H257010	Lid, Top Cover
002D	4				51260408Z0	B.T. Screw B4x8
002D		4	4	4	51260408U0	B.T. Screw B4x8
003D	2	2	2	2	2991259010	Bushing
004D	1	1	1	1	123Z257010	Lid, Bottom Cover
005D	4	4	4	4	403H057010	Leg
006D	3	3	3	3	51280308B0	B.H. Tapped Screw B3x8

REF. DESIG.	Q'TY U	N	A	F	PART NO.	DESCRIPTION
007D	5	5	5	5	51280308B0	B.H. Tapped Screw B3x8
008D	1	1	1	1	213H118020	Spacer
009D	3	3	3	3	213H056020	Buffer
001R	1	1	1		2932861110	Label Top Cover
002R	1	1	1		2578861010	Label Bottom Cover

- **[C03-99] Rear Panel**



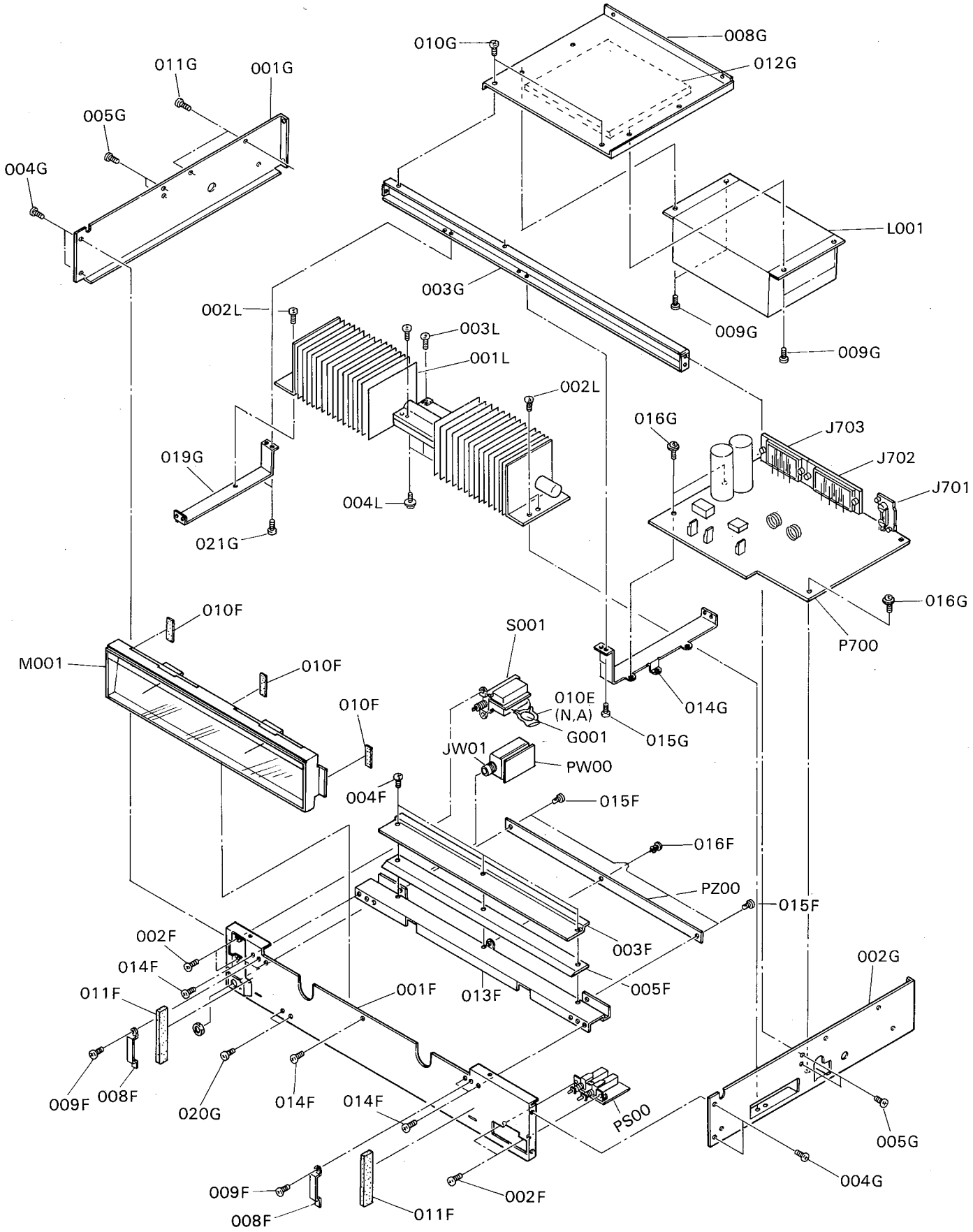
(U), (F) Version

- (U) for U.S.A.
- (N) for Europe
- (A) for Australia
- (F) for Japan

REF. DESIG.	Q'TY U	N	A	F	PART NO.	DESCRIPTION
001E	1				123Z160010	Bracket Rear Panel
001E		1	1		123Z160020	Bracket "
001E				1	123Z160030	Bracket "
002E	4	4	4	4	51280308U0	B.H. Tapped Screw B3x8
003E	2	2	2	2	51280308U0	B.H. Tapped Screw B3x8
004E	2	2	2	2	51280308U0	B.H. Tapped Screw B3x8
005E	2	2	2	2	51280308U0	B.H. Tapped Screw B3x8
006E	4	4	4	4	51280308U0	B.H. Tapped Screw B3x8
007E	1	1	1	1	51704059B0	Spec. Set Screw
008E	1			1	1455259030	Bushing
008E		2	2		51420308T0	O.C.H. Tapped Screw O3x8
009E		2	2		51280308U0	B.H. Tapped Screw B3x8
012E	1	1	1	1	2112265010	Indicator
014E		1	1		4581861010	Label
003R	1				9511101070	Label UL

REF. DESIG.	Q'TY U	N	A	F	PART NO.	DESCRIPTION
F001	1				FS10400500	Fuse 4A 250V
F001		1	1		FS10200800	Fuse T2A 250V
F001				1	FS10400600	Fuse 4A 250V
J001	1				YJ08000310	Jack, Fuse Holder
J001		1	1		YJ08000290	Jack, Fuse Holder
J001				1	YJ08000300	Jack, Fuse Holder
J021	1			1	YJ04000560	Jack, AC Outlet
J031	1	1	1	1	YL03010250	Terminal, GND
J091		1	1		BY05080010	Voltage Selector
J092		1	1		YP04000590	Plug, Inlet
W001	1				YC01900070	A.C. Power Cord
W001		1			ZC01805030	A.C. Power Cord
W001			1		ZC02006030	A.C. Power Cord
W001				1	YC01800190	A.C. Power Cord

- **[P01-99] Front Chassis and General Parts**

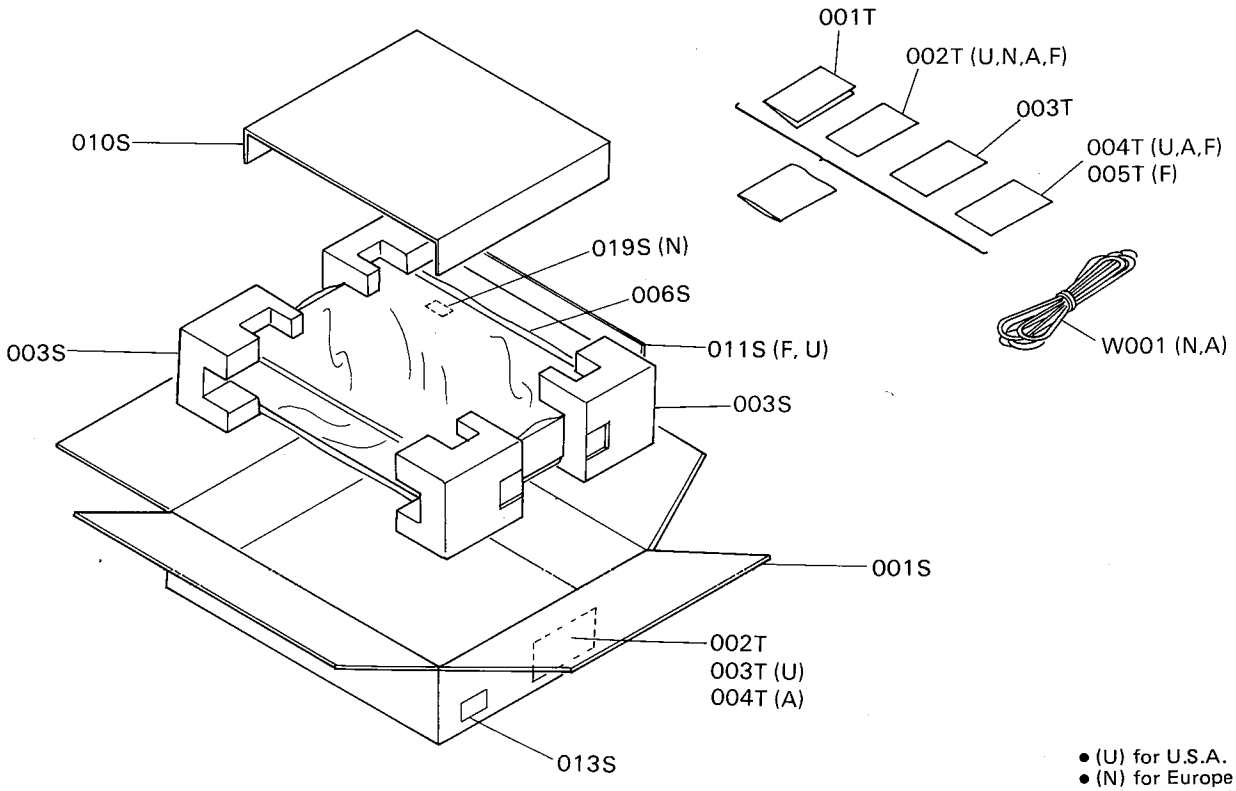


- (U) for U.S.A.
- (N) for Europe
- (A) for Australia
- (F) for Japan

REF. DESIG.	Q'TY U	N	A	F	PART NO.	DESCRIPTION
010E		1	1		403H120010	Insulator
001F	1	1	1	1	123Z105010	Front Chassis
002F	4	4	4	4	51100306A9	B.H.M. Screw B3x6
003F	1	1	1	1	123Z160120	Bracket
004F	3	3	3	3	51280308B0	B.H. Tapped Screw B3x8
005F	1	1	1	1	213H274010	Reflector
008F	2	2	2	2	123Z160070	Bracket
009F	2	2	2	2	51280308B0	B.H. Tapped Screw B3x8
010F	3	3	3	3	213H056010	Buffer
011F	2	2	2	2	213H118010	Spacer
013F	1	1	1	1	123Z160100	Bracket
014F	4	4	4	4	51280308B0	B.H. Tapped Screw B3x8
015F	2	2	2	2	51280306B0	B.H. Tapped Screw B3x6
016F	1	1	1	1	2912259020	Bushing
001G	1	1	1	1	123Z160040	Bracket, Left
002G	1	1	1	1	123Z160050	Bracket, Right
003G	1	1	1	1	123Z160060	Bracket, Center
004G	4	4	4	4	51280306B0	B.H. Tapped Screw B3x6
005G	4	4	4	4	51280306B0	B.H. Tapped Screw B3x6
008G	1	1	1	1	123Z160110	Bracket
009G	4	4	4	4	51260408U0	B.T. Screw B4x8
010G	2	2	2	2	51280306B0	B.H. Tapped Screw B3x6
011G	2	2	2	2	51280306B0	B.H. Tapped Screw B3x6
012G	1	1	1	1	213H056030	Buffer

REF. DESIG.	Q'TY U	N	A	F	PART NO.	DESCRIPTION
014G	1	1	1	1	123Z160090	Bracket
015G	2	2	2	2	51280306B0	B.H. Tapped Screw B3x6
016G	3	3	3	3	51260308B0	B.T. Screw B3x8
019G	1	1	1	1	123Z160080	Bracket
020G	2	2	2	2	51280306B0	B.H. Tapped Screw B3x6
021G	2	2	2	2	51280306B0	B.H. Tapped Screw B3x6
001L	1	1	1	1	123Z267010	Heat Sink
002L	3	3	3	3	51280306B0	B.H. Tapped Screw B3x6
003L	2	2	2	2	51100310A9	B.H. M. Screw B3x10
004L	4	4	4	4	51480310A9	F. Washer Screw F3x10
J701	1	1	1	1	YT02020210	Terminal
J702	1	1	1	1	YT03040190	Terminal
J703	1	1	1	1	YT03040190	Terminal
JW01	1	1	1	1	YJ01001400	Jack, Headphone
G001	1				DK18103530	Ceramic 0.01μF
G001		1	1		DK18103840	Ceramic 0.01μF
G001				1	DK18103850	Ceramic 0.01μF
L001	1				TS19617010	Power Transformer
L001		1	1		TS19617020	Power Transformer
L001				1	TS19617030	Power Transformer
M001	1	1	1	1	IM12255010	D.C. Meter
S001	1				SP01010420	Push Switch, Power
S001		1	1		SP01010390	Push Switch, Power
S001				1	SP01010430	Push Switch, Power

• [H01-99] Packing Materials



- (U) for U.S.A.
- (N) for Europe
- (A) for Australia
- (F) for Japan

REF. DESIG.	Q'TY U	N	A	F	PART NO.	DESCRIPTION
001S	1				123Z801010	Packing Case
001S		1	1		123Z801020	Packing Case
001S				1	123Z801030	Packing Case
003S	2	2	2	2	001H809010	Cushion
006S	1	1	1	1	9090909040	Polyethylene Sheet
010S	1	1	1	1	2918107350	Sheet
011S	1			1	2918107390	Sheet
013S	2				9526019010	Serial No. Card
013S		4			9526019060	Serial No. Card
013S			4		9526019030	Serial No. Card
013S				4	9526019040	Serial No. Card
019S		1			2731821010	Silicagel

REF. DESIG.	Q'TY U	N	A	F	PART NO.	DESCRIPTION
001T	1		1		125Z851010	Instructions
001T		1			125Z851310	Instructions
001T				1	125Z851110	Instructions
002T	1		1		123Z851020	Instructions
002T		1			123Z851320	Instructions
002T				1	9631000110	Guarantee Card
003T	1				2818854020	Guarantee Card
003T		1			123Z856010	Circuit Diagram
003T			1		2205851040	Instructions
003T				1	2976851040	Instructions
004T	1				2225813010	Envelope
004T			1		9631000090	Guarantee Card
004T				1	2976813020	Envelope
005T				1	9650000030	S. Station Card

8. ELECTRICAL PARTS LIST

- (U) for U.S.A.
- (N) for Europe
- (A) for Australia
- (F) for Japan

REF. DESIG.	Q'TY U	N	A	F	PART NO.	DESCRIPTION
						P700-MAIN AMP & POWER SUPPLY CIRCUIT BOARD
P700	1	1	1	1	YK213H1310	P.W. Board, Main Amp & Power Supply
	1	1	1		ZZ213H1310	P.W. Board Assembly
						P700-CAPACITORS
C701	1	1	1	1	EA10605030	Elect 10μF 50V
C702	1	1	1	1	EA10605030	Elect 10μF 50V
C703	1	1	1	1	DK16821300	Ceramic 820pF ±10%
C704	1	1	1	1	DK16821300	Ceramic 820pF ±10%
C705	1	1	1	1	EA10605030	Elect 10μF 50V
C706	1	1	1	1	EA10605030	Elect 10μF 50V
C707	1	1	1	1	EQ10601630	Elect 10μF 16V
C708	1	1	1	1	EQ10601630	Elect 10μF 16V
C709	1	1	1	1	EQ10601630	Elect 10μF 16V
C710	1	1	1	1	EQ10601630	Elect 10μF 16V
C711	1	1	1	1	DD15100300	Ceramic 10pF ±5%
C712	1	1	1	1	DD15100300	Ceramic 10pF ±5%
C713	1	1	1	1	DD15220300	Ceramic 22pF ±5%
C714	1	1	1	1	DD15200300	Ceramic 20pF ±5%
C715	1	1	1	1	EA10605030	Elect 10μF 50V
C716	1	1	1	1	EA10605030	Elect 10μF 50V
C717	1	1	1	1	DK16101510	Ceramic 100pF ±10%
C718	1	1	1	1	DK16101510	Ceramic 100pF ±10%
C719	1	1	1	1	DK16101510	Ceramic 100pF ±10%
C720	1	1	1	1	DK16101510	Ceramic 100pF ±10%
C721	1	1	1	1	DF17473520	Film 0.047μF±20%
C722	1	1	1	1	DF17473520	Film 0.047μF±20%
C723	1	1	1	1	EA10705030	Elect 100μF 50V
C724	1	1	1	1	EA10705030	Elect 100μF 50V
C725	1	1	1	1	EA10705030	Elect 100μF 50V
C726	1	1	1	1	EA10705030	Elect 100μF 50V
C801	1	1	1	1	EB82805010	Elect 8200μF 50V
C802	1	1	1	1	EB82805010	Elect 8200μF 50V
C803	1	1	1	1	EA10602530	Elect 10μF 25V
C804	1	1	1	1	EA10602530	Elect 10μF 25V
C805	1	1	1	1	DK18103560	Ceramic 0.01μF +80,–20%
C806	1	1	1	1	DK18103560	Ceramic 0.01μF +80,–20%
C807	1	1	1	1	DK18103560	Ceramic 0.01μF +80,–20%
C808	1	1	1	1	DK18103560	Ceramic 0.01μF +80,–20%
C809	1	1	1	1	EA10505030	Elect 1μF 50V
CX01	1	1	1	1	DF16223300	Film 0.022μF±10%
CX02	1	1	1	1	DF16223300	Film 0.022μF±10%
						P700-RESISTORS (All Resistors are ±5% and ¼W)
R701	1	1	1	1	GD05104140	100kΩ
R702	1	1	1	1	GD05104140	100kΩ
R703	1	1	1	1	GD05331140	330Ω
R704	1	1	1	1	GD05331140	330Ω
R705	1	1	1	1	GD05473140	47kΩ
R706	1	1	1	1	GD05473140	47kΩ
R707	1	1	1	1	GD05151140	150Ω
R708	1	1	1	1	GD05151140	150Ω
R709	1	1	1	1	GD05152140	1.5kΩ
R710	1	1	1	1	GD05152140	1.5kΩ
R711	1	1	1	1	GD05152140	1.5kΩ
R712	1	1	1	1	GD05152140	1.5kΩ
R713	1	1	1	1	GD05391140	390Ω
R714	1	1	1	1	GD05391140	390Ω
R715	1	1	1	1	GD05433140	43kΩ
R716	1	1	1	1	GD05433140	43kΩ
R717	1	1	1	1	GD05392140	3.9kΩ
R718	1	1	1	1	GD05392140	3.9kΩ
R719	1	1	1	1	GD05124140	120kΩ
R720	1	1	1	1	GD05124140	120kΩ
R721	1	1	1	1	GD05473140	47kΩ
R722	1	1	1	1	GD05473140	47kΩ
R723	1	1	1	1	GD05103140	10kΩ
R724	1	1	1	1	GD05103140	10kΩ
R725	1	1	1	1	GD05153140	15kΩ
R726	1	1	1	1	GD05153140	15kΩ
R727	1	1	1	1	GD05333140	33kΩ
R728	1	1	1	1	GD05333140	33kΩ
R729	1	1	1	1	GD05473140	47kΩ
R730	1	1	1	1	GD05473140	47kΩ
R731	1	1	1	1	GD05820140	82Ω
R732	1	1	1	1	GD05820140	82Ω
R733	1	1	1	1	RA05010050	Trimming 470Ω (B)
R734	1	1	1	1	RA05010050	Trimming 470Ω (B)
R735	1	1	1	1	GD05102140	1kΩ
R736	1	1	1	1	GD05102140	1kΩ
R737	1	1	1	1	GD05820140	82Ω
R738	1	1	1	1	GD05820140	82Ω
R739	1	1	1	1	GD05151140	150Ω
R740	1	1	1	1	GD05151140	150Ω
R741	1	1	1	1	NE10472050	0.47Ω 5W
R742	1	1	1	1	NE10472050	0.47Ω 5W
R743	1	1	1	1	GA05100030	10Ω 3W
R744	1	1	1	1	GA05100030	10Ω 3W
R745	1	1	1	1	GA05100010	10Ω 1W
R746	1	1	1	1	GA05100010	10Ω 1W
R747	1	1	1	1	NF02101140	100Ω
R748	1	1	1	1	NF02101140	100Ω
R749	1	1	1	1	NF02101140	100Ω
R750	1	1	1	1	NF02101140	100Ω
R801	1	1	1	1	GD05472140	4.7kΩ
R802	1	1	1	1	GD05472140	4.7kΩ
R803	1	1	1	1	GD05472140	4.7kΩ
R804	1	1	1	1	GD05472140	4.7kΩ
R805	1	1	1	1	GD05103140	10kΩ
RN01	1	1	1	1	GD05682140	6.8kΩ
RN02	1	1	1	1	GD05682140	6.8kΩ
RN03	1	1	1	1	GD05682140	6.8kΩ
RN04	1	1	1	1	GD05682140	6.8kΩ
RN05	1	1	1	1	GD05473140	47kΩ
RN06	1	1	1	1	GD05473140	47kΩ
RN07	1	1	1	1	GD05821140	820Ω
RN08	1	1	1	1	GD05821140	820Ω
RN09	1	1	1	1	GD05821140	820Ω
RN10	1	1	1	1	GD05821140	820Ω

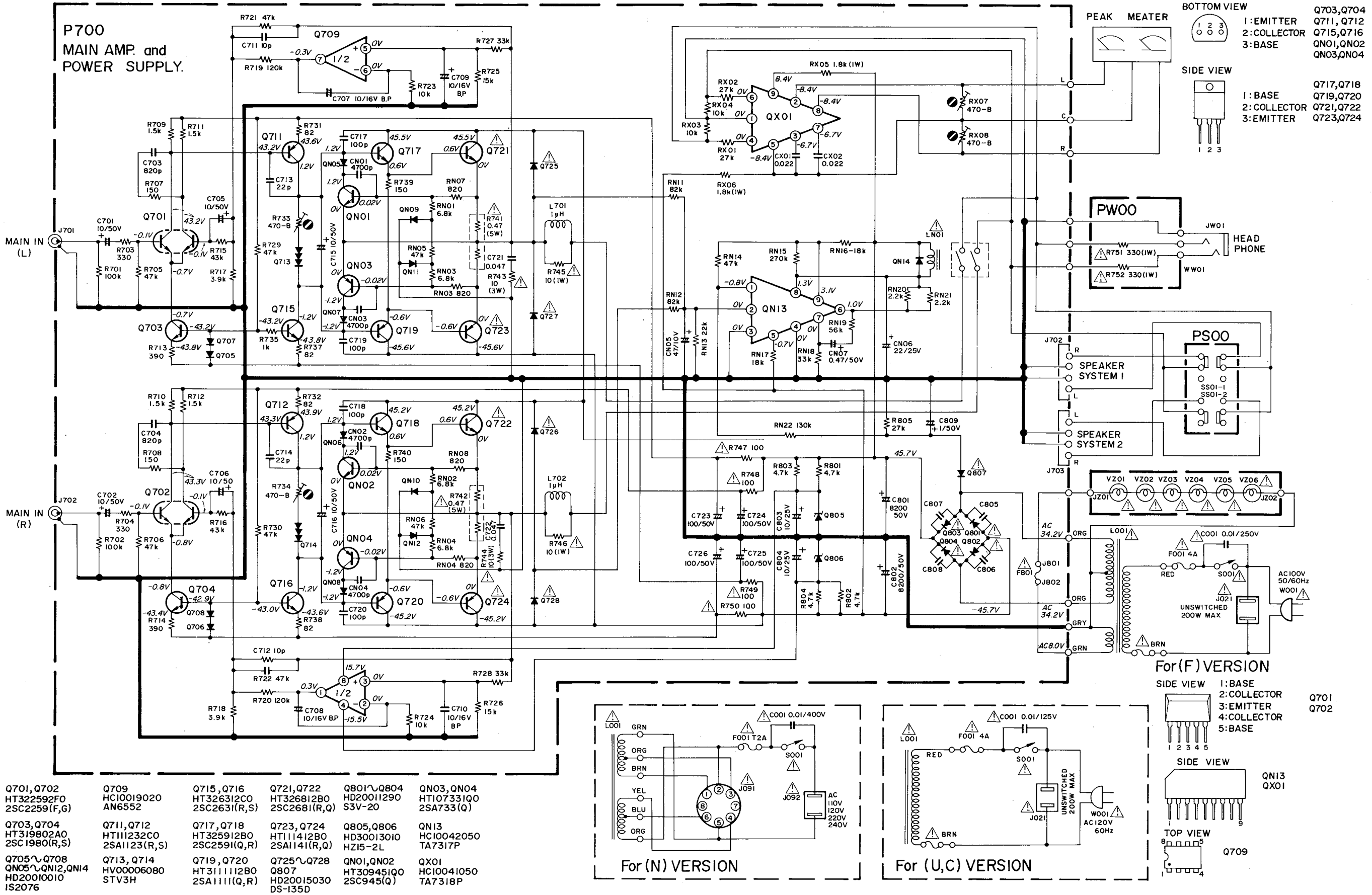
- (U) for U.S.A.
- (N) for Europe
- (A) for Australia
- (F) for Japan

REF. DESIG.	Q'TY U	N	A	F	PART NO.	DESCRIPTION
RN11	1	1	1	1	GD05823140	82kΩ
RN12	1	1	1	1	GD05823140	82kΩ
RN13	1	1	1	1	GD05223140	22kΩ
RN14	1	1	1	1	GD05473140	47kΩ
RN15	1	1	1	1	GD05274140	270kΩ
RN16	1	1	1	1	GD05183140	18kΩ
RN17	1	1	1	1	GD05183140	18kΩ
RN18	1	1	1	1	GD05333140	33kΩ
RN19	1	1	1	1	GD05563140	56kΩ
RN20	1	1	1	1	GD05222140	2.2kΩ
RN21	1	1	1	1	GD05222140	2.2kΩ
RN22	1	1	1	1	GD05134140	130kΩ
RX01	1	1	1	1	GD05273140	27kΩ
RX02	1	1	1	1	GD05273140	27kΩ
RX03	1	1	1	1	GD05103140	10kΩ
RX04	1	1	1	1	GD05103140	10kΩ
RX05	1	1	1	1	GA05182010	1.8kΩ 1W
RX06	1	1	1	1	GA05182010	1.8kΩ 1W
RX07	1	1	1	1	RA05010050	Trimming 470Ω (B)
RX08	1	1	1	1	RA05010050	Trimming 470Ω (B)
						P700-SEMICONDUCTORS
Q701	1	1	1	1	HT322592F0	Transistor 2SC2259(F, G)
Q702	1	1	1	1	HT322592F0	Transistor 2SC2259(F, G)
Q703	1	1	1	1	HT319802A0	Transistor 2SC1980(R, S)
Q704	1	1	1	1	HT319802A0	Transistor 2SC1980(R, S)
Q705	1	1	1	1	HD20010010	Diode 1S2076
Q706	1	1	1	1	HD20010010	Diode 1S2076
Q707	1	1	1	1	HD20010010	Diode 1S2076
Q708	1	1	1	1	HD20010010	Diode 1S2076
Q709	1	1	1	1	HC10019020	IC AN6552
Q711	1	1	1	1	HT111232C0	Transistor 2SA1123(R, S)
Q712	1	1	1	1	HT111232C0	Transistor 2SA1123(R, S)
Q713	1	1	1	1	HV00006080	Varistor STV-3H
Q714	1	1	1	1	HV00006080	Varistor STV-3H
Q715	1	1	1	1	HT326312C0	Transistor 2SC2631(R, S)
Q716	1	1	1	1	HT326312C0	Transistor 2SC2631(R, S)
Q717	1	1	1	1	HT325912B0	Transistor 2SC2591(Q, R)
Q718	1	1	1	1	HT325912B0	Transistor 2SC2591(Q, R)
Q719	1	1	1	1	HT111112B0	Transistor 2SA1111(Q, R)
Q720	1	1	1	1	HT111112B0	Transistor 2SA1111(Q, R)
Q721	1	1	1	1	HT326812B0	Transistor 2SC2681(R, Q)
Q722	1	1	1	1	HT326812B0	Transistor 2SC2681(R, Q)
Q723	1	1	1	1	HT111412B0	Transistor 2SA1141(R, Q)
Q724	1	1	1	1	HT111412B0	Transistor 2SA1141(R, Q)
Q725	1	1	1	1	HD20015030	Diode DS-1350
Q726	1	1	1	1	HD20015030	Diode DS-1350
Q727	1	1	1	1	HD20015030	Diode DS-1350
Q728	1	1	1	1	HD20015030	Diode DS-1350
Q801	1	1	1	1	HD20011290	Diode S3V-20
Q802	1	1	1	1	HD20011290	Diode S3V-20
Q803	1	1	1	1	HD20011290	Diode S3V-20
Q804	1	1	1	1	HD20011290	Diode S3V-20
Q805	1	1	1	1	HD30013010	Zener HZ15-2L
Q806	1	1	1	1	HD30013010	Zener HZ15-26
Q807	1	1	1	1	HD20015030	Diode DS-135D

REF. DESIG.	Q'TY U	N	A	F	PART NO.	DESCRIPTION
QN01	1	1	1	1	HT309451Q0	Transistor 2SC945(Q)
QN02	1	1	1	1	HT309451Q0	Transistor 2SC945(Q)
QN03	1	1	1	1	HT107331Q0	Transistor 2SA733(Q)
QN04	1	1	1	1	HT107331Q0	Transistor 2SA733(Q)
QN05	1	1	1	1	HD20010010	Diode 1S2076
QN06	1	1	1	1	HD20010010	Diode 1S2076
QN07	1	1	1	1	HD20010010	Diode 1S2076
QN08	1	1	1	1	HD20010010	Diode 1S2076
QN09	1	1	1	1	HD20010010	Diode 1S2076
QN10	1	1	1	1	HD20010010	Diode 1S2076
QN11	1	1	1	1	HD20010010	Diode 1S2076
QN12	1	1	1	1	HD20010010	Diode 1S2076
QN13	1	1	1	1	HC10042050	IC TA7317P
QN14	1	1	1	1	HD20010010	Diode 1S2076
QX01	1	1	1	1	HC10041050	IC TA7318P
						P700-COILS
L701	1	1	1	1	LL23915120	Coil, Choke
L702	1	1	1	1	LL23915120	Coil, Choke
LN01	1	1	1	1	LY20240190	Relay
						P700-MISCELLANEOUS
F801	1				FS10100500	Fuse 1A 250V
F801		1	1		FS10100800	Fuse T1A 250V
F801				1	FS10100600	Fuse 1A 250V
J801	1			1	YJ08000170	Jack, Fuse Holder
J801		1	1		YJ08000270	Jack, Fuse Holder
J802	1			1	YJ08000170	Jack, Fuse Holder
J802		1	1		YJ08000270	Jack, Fuse Holder
						PS00-SPEAKER SWITCH CIRCUIT BOARD
PS00	1	1	1	1	YK213H1320	P.W. Board, Speaker Switch
	1	1	1		ZZ213H1320	P.W. Board Assembly
						PS00-SWITCH
SS01	1	1	1	1	SP02020520	Push Switch, Speaker
						PW00-HEADPHONE CIRCUIT BOARD
PW00	1	1	1	1	YK213H1330	P.W. Board Head Phone
	1	1	1		ZZ213H1330	P.W. Board Assembly
						PW00-MISCELLANEOUS
JW01	1	1	1	1	YJ01001400	Jack, Head Phone
WW01	1	1	1	1	YU03700240	Jumper Lead, 3Px700mm
R751	1	1	1	1	GA05331010	330Ω 1W
R752	1	1	1	1	GA05331010	330Ω 1W
						PZ00-LAMP CIRCUIT BOARD
PZ00	1	1	1	1	YF213H0010	P.W. Board, Lamp
	1	1	1		ZZ213H0010	P.W. Board Assembly
						PZ00-LAMPS
VZ01	1	1	1	1	IN10080510	Lamp 8V 100mA
VZ02	1	1	1	1	IN10080510	Lamp 8V 100mA
VZ03	1	1	1	1	IN10080510	Lamp 8V 100mA
VZ04	1	1	1	1	IN10080510	Lamp 8V 100mA
VZ05	1	1	1	1	IN10080510	Lamp 8V 100mA
VZ06	1	1	1	1	IN10080510	Lamp 8V 100mA

(W01-99)	Assembly and Wiring
(T01-99)	Adjustment
(X01-00)	Correction

11. SCHEMATIC DIAGRAM



Q701, Q702 HT322592F0 2SC2259(F,G)	Q709 HC10019020 AN6552	Q715, Q716 HT326312C0 2SC2631(R,S)	Q721, Q722 HT326812B0 2SC2681(R,Q)	Q801∿Q804 HD20011290 S3V-20	QN03, QN04 HTI0733IQ0 2SA733(Q)
Q703, Q704 HT319802A0 2SC1980(R,S)	Q711, Q712 HTIII232C0 2SAI123(R,S)	Q717, Q718 HT325912B0 2SC2591(Q,R)	Q723, Q724 HTI1141 2B0 2SAI141(R,Q)	Q805, Q806 HD30013010 HZ15-2L	QN13 HC10042050 TA7317P
Q705∿Q708 QN05∿QNI2, QNI4 HD20010010 IS2076	Q713, Q714 HV00006080 STV3H	Q719, Q720 HT3111112B0 2SA1111(Q,R)	Q725∿Q728 Q807 HD20015030 DS-135D	QN01, QN02 HT30945IQ0 2SC945(Q)	QX01 HC10041050 TA7318P

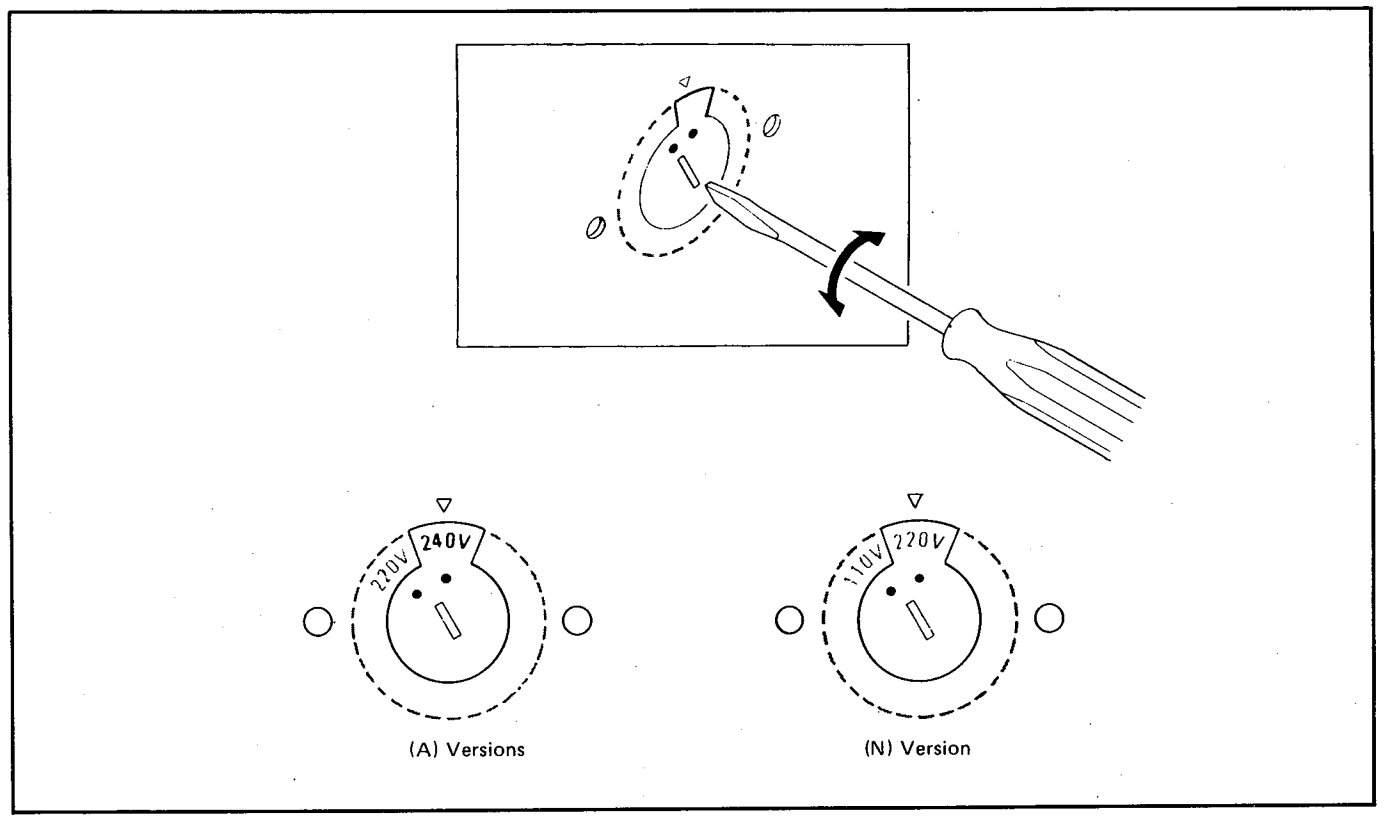
Note on safety: The parts marked with ⚠ are important parts on the safety.
Please use the parts having the designated parts number without fail.

Components and wiring are subject to change for modification without notice.

9. VOLTAGE CONVERSION

To convert the unit to a different power source voltage, change the position as illustrated in the drawing below.

CAUTION: DISCONNECT POWER SUPPLY CORD FROM AC OUTLET BEFORE CONVERTING VOLTAGE. DO NOT DISASSEMBLE THE VOLTAGE SELECTOR ABSOLUTELY.



(A) Versions (N) Version

NOTE ON SAFETY: THE PARTS MARKED WITH ⚠ ARE IMPORTANT PARTS ON THE SAFETY. PLEASE USE THE PARTS HAVING THE DESIGNATED PARTS NUMBERS WITHOUT FAIL.

10. TECHNICAL SPECIFICATIONS

AUDIO SECTION

POWER OUTPUT PER CHANNEL
- 4 OHMS DIN 1 kHz . . . . . 85 W
- 4 OHMS RMS 1 kHz . . . . . 80 W
- 8 OHMS DIN 1 kHz . . . . . 65 W
- 8 OHMS RMS 1 kHz . . . . . 60 W

TOTAL HARMONIC DISTORTION AT RMS 8 OHMS 0.03%
I.M. DISTORTION 0.03%
DAMPING FACTOR 8 OHMS (1 kHz) 80

Input Sensitivity/Impedance . . . . . 1.5V/32 kohms
Frequency Response (+0/–0.3 dB) . . . . . 5 Hz–50 kHz
Signal-to-Noise Ratio . . . . . 120 dB

GENERAL

Power Requirements . . . . . 220 V AC, 50 Hz
(E and N versions are featuring an external voltage selector for use on other voltages. Other versions can be converted by a qualified technician to operate on 240V.)
Power Consumption (at Rated Output, Both Channels Operating) . . . . . 220 W
Dimensions
- Panel Width . . . . . 416 mm
- Panel Height . . . . . 73 mm
- Depth . . . . . 302 mm

Weight
- Unit alone . . . . . 7.9 kg

Specifications and appearance are subject to change for modification without notice.

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